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# In Different Different Cups Change in the Number of Fibers

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**Abstract:** in this article, research work was carried out on a farm in Karshi district. For him, a special 10x10 meter area was selected from the cotton field, cotton was picked from the first, 3th, 6th, 9th and 12th days of cotton and separated from the seed by hand. The number of fibers in the bag ripened for different periods was determined in the laboratory of the "Textile Materials Science" department.

**Keywords:** juvoldoid beak, smooth surface, green color, in some forms with anthocyanin spots, elongated, ovoid, oil, fodder - Kunjara and Shelukha, buds in the axils of leaves on the main stem, long beak, small pit on top.

## I. INTRODUCTION

The importance of cotton in the national economy is undeniable. Because there is probably no economic sector that does not use cotton or its products in one or another quantity. Unlike other agricultural crops, cotton provides three types of valuable products in one way: raw material for textile products - fiber, oil for food, animal feed - kunjara and shelukha. Cotton is grown mainly for fiber. On average, 320-340 kg of fiber and 560-580 kg of seed are obtained from 1 ton of raw cotton. From 340 kg of fiber, in turn, 3500 - 4000 m 2 gasmol is produced, and from 580 kg of seed, 112 kg of oil, 10 kg of soap, 270 kg of kunjara, 170 kg of shelukha and 8 kg of lint (fluff) are produced.

Cotton has vegetative (monopodial) and fruiting (sympodial) branches. They develop from buds in leaf axils on the main stem.

Cotton is distinguished by three types of branching. In unrestricted branching varieties, under favorable conditions, crop branches grow at the expense of axillary shoots, and a new joint space appears. The length of the joint intervals of the harvest branches depends on the type and variety of cotton. Branches with a joint length of 2-5 cm belong to the first type, 5-10 cm to the second type, 10-15 cm to the third type, and 15-20 cm to the fourth type. On the 20-25th day of seeding, the pod reaches its maximum size, and in the next 40-45 days, the seed and fiber mature. The pods of G. hirsutum L. are large, 4-5-lobed, often oval in shape, with a jumbo-shaped beak, smooth surface, green in color, and some forms have anthocyanin spots. The weight of boll cotton varies from 1.5-2 g (mainly in wild and semi-wild forms) to 8-12 g.

The pods of the G. barbadense L. type are 3, sometimes 4-lobed, conical, with a long beak, with a small pit on top, dark green, shiny. The weight of cotton wool is 3-4 g per louse. The pods of G.herbaceum L. are 4-5-lobed, globose, without beak, smooth surface, light green or with

anthocyanin spots, thin wall, open a little when opened, half open or closed. The weight of one bag of cotton ranges from 1.0-1.5 to 6-7 g.

The pods of G.arboreum L. are 3-4-lobed, elongated, ovoid, and open well. One bag of cotton contains 25-35 seeds. One of the important economic characteristics of cotton varieties is quick ripening combined with yield. The speed of ripening depends on the location of the first crop pod, the beginning and peak of flowering. The lower the first crop branch is located, the faster the flowering peak and ripening occurs. Within a species, there are different forms of acceleration. They can be from very fast-ripening to perennial late-ripening forms with a growing period of 115-120 days. The growth and development of cotton is different due to the passage of periods: from seed germination - 7-12 days, from seed germination to the appearance of the first cob - 7-10 days, to the appearance of the second cob - 4-5 days, from the germination of the seed to the appearance of the first cob - 25-30 days, from the appearance of the first pod to flowering - 25-30 days, from flowering to the opening of the first bud - 55-60 days.

The number of fibers in the bolls of cotton varies. Some sacs have three and some sacs have five. Therefore, the number of fibers varies widely. In addition, the number of fibers on the surface of the seed varies.

The surface of the seed is covered with fiber. Until the cotton was cultivated, the fiber of the seed played a certain role in the propagation and preservation of the offspring. In the cultivated forms of cotton, the fiber cover on the surface of the seed acts as a buffer, that is, when the seed is planted, it protects it from excessive moisture, if there is a lot of moisture in the soil, it is prevented from rotting, and if the moisture is low, it keeps it in sufficient quantity. At the same time, it protects against low spring temperatures.

The seed fiber of cultivated varieties is long, straight, easily separated from the seed coat, ripe, thin and hygroscopic. Its length is mostly more than 20 mm. Lint is less than 20 mm long, and delint is less than 5 mm long. Cultivated cotton becomes more bollish as it is spun, which is an important technological advantage over wild forms. The fiber length of cotton species can vary from 10 mm to 50-55 mm, depending on genetic potential and growing conditions. The shortest fiber (8-10 mm) is found in wild forms of cotton, and the longest fiber is found in specimens of the Si-Island type of G. barbadense L. (50-55 mm). By fiber length, all varieties are divided into short fiber (27-30 mm), medium fiber (32-33 mm), long fiber (34-36 mm) and thin fiber (37-42 mm) types. In the following years, depending on the quality of fabrics and textiles produced, cotton fiber was divided into types according to length, hardness and fineness (metric number).

One of the main indicators that determine the quality of the fiber is its density. Accordingly, the fiber appears in different colors in the polarized light field. According to colors, fiber is divided into 4 types. Ripe fiber is golden-yellow and golden in color. It belongs to the first group, and its percentage in relation to the total fiber determines the type of cotton fiber. The more mature fibers, the higher the quality of the cotton fiber. The fiber of cotton samples of different species changes its quality indicators under different conditions. 85-90 percent of high-quality fiber is in the plants grown on the background of high agrotechnics.

Later, the textile industry changed the fiber quality requirement several times, these requirements focused on increasing fiber length, toughness, fineness and relative breaking length. This became the basis for the cultivation of new varieties of cotton.

## II. METHODOLOGY

The main technological indicators that determine the quality of the fiber include the staple length, micron, hardness, linear density, breaking length and elongation of the fiber.

Research work was carried out to determine the number of fibers in the pod according to the level of ripeness. For this, 100 fibers were examined under a microscope and divided into groups according to the degree of maturity.

Table 1 shows the test results for determining the number of fibers according to the degree of maturity of the fibers.

**Table 1. In pods ripened in different periods change in the number of fibers**

| № | Opening of the cyst term | The number of fibers according to the level of ripeness | | |
|---|---|---|---|---|
| | | 0-1,5 | 1,5-3,0 | 3,0-4,5 |
| 1. | The first open cyst | 14 | 20 | 66 |
| 2. | Open blister for 3 days | 11 | 17 | 72 |
| 3. | Open blister for 6 days | 10 | 15 | 75 |
| 4. | Open blister for 9 days | 9 | 14 | 77 |
| 5. | Open blister for 12 days | 6 | 10 | 84 |

Based on the obtained test results, Figure 1 shows the graph of the change in the number of fibers in the pods ripened at different times.

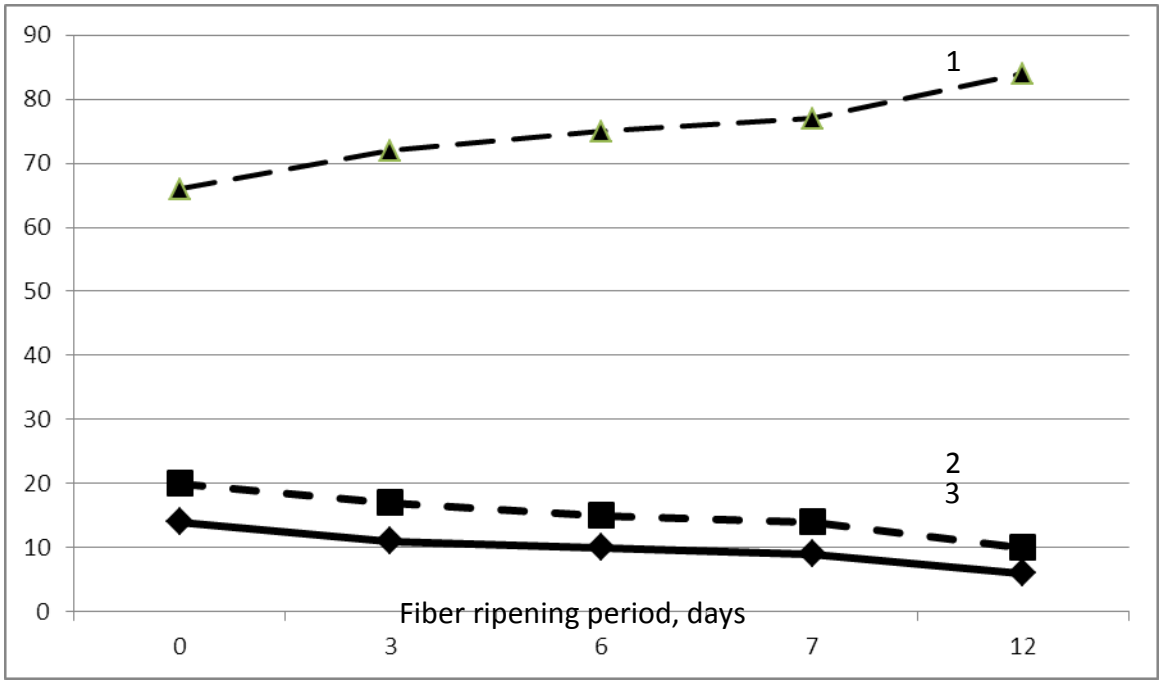


Figure 1. Changes in the number of fibers in the pod during the ripening period of the fiber according to the ripening period.

1-0-1,5 according to the maturity level of the fiber;

2-1,5-3,0 according to the maturity level of the fiber;

3-3,0-4,5 according to the maturity level of the fiber.

## III. RESULTS AND DISCUSSION

Selection of fields and preparation for picking is of great importance in picking cotton crops without destroying nests. Preparation of fields for harvesting begins 10-12 days after defoliation. First of all, conditions will be created for tractor-trailers to enter the field. In each farm, a flat area is prepared for drying the picked cotton. In the process of drying cotton, it is cleaned of green leaves, chaff and other impurities, and its moisture level is adjusted. Clean and dry raw materials are accepted for higher grades, the profit of the farmer increases.

In order to determine the time of the beginning of the harvest, 10 plants are taken from each of the 5 places of the dalanint by envelope method, and the total number of pods in them and the ones that have opened are counted. When 80-85% of the total available pods are opened, harvesting is started. For example, if 120 out of a total of 150 pods on 10 plants are found to be open, the field is considered ready for harvesting.

Analyzing the results of the study, compared to the indicators of the fiber in the pod when the fiber maturity level is 0-1.5, it is 30.0% when the fiber maturity level is 1.5-2.5, and the fiber maturity level is 3.0-4.5 by 78.8% when compared to the indicators of the fiber in the pods opened for 3 days, by 35.3% when the fiber maturity level is 1.5-3.0, by 84.7% when the fiber maturity level is 3.0-4.5 , compared to the indicators of the fiber in pods opened for 6 days, by 33.3% when the fiber maturity level is 1.5-2.5, by 86.7% when the fiber maturity level is 3.0-4.5, in the pods opened for 9 days compared to the indicators of the fiber, 35.7% when the degree of maturity of the fiber is 1.5-3.0, 88.3% when the degree of maturity of the fiber is 3.0-4.5. 40.0% when the degree of maturity is 1.5-2.5, the degree of maturity of the fiber is 3.0 It was found that it increased by 92.9% when it was -4.5. As it can be seen from the analysis of the conducted test results, it was found that the more the pods are opened in the field, the better the fibers ripen.

## IV. CONCLUSION

From the analysis of the test results, it can be seen that the longer the pod is opened, the fiber maturity is 30.0% to 40.0% when the fiber maturity is 1.5-3.0, and 78.8% when the fiber maturity is 3.0-4.5. it was found that the number of fibers increased from to 92.9%.

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